

REMARKS

Currently, claims 1-22, 25, and 31-35 remain pending in the present application, including independent claims 1, 12, 13, 14, and 31. Claims 6-9, 13-19, 21, and 33 are indicated as being allowable.

In the Office Action, independent claims 1, 12, and 31 were rejected under 35 USC § 102 in view of U.S. Patent No. 5,932,299 to Katoot. As now amended, however, it is believed that all of the claims patentably define over Katoot as described in more detail below.

Claims 1, 12, and 31 are generally directed to a surface-modified article, such as a glove. The article is made from an elastomeric matrix having an outside surface. In accordance with the present invention, a plurality of silica particles are adhered to at least a portion of the outside surface. Claims 1, 12, and 31 all require that at least certain of the silica particles be partially embedded within the outside surface of the elastomeric article.

As described in the specification, the surface treatment of the present invention produces elastomeric gloves having improved gripping properties. For example, in one embodiment, the treated surface can have a higher coefficient of friction. Further, the surface treatment of the present invention can provide improved gripping properties even when the outside surface of the article is wet.

Katoot, on the other hand, is not directed to improving the gripping properties of a glove, but, instead, is directed to a method for modifying the surfaces of objects to increase the lubricity, hydrophilicity, hydrophobicity, or biofunctionality of the surface of an object. The surface of an object is modified by first coating the surface with a polymer composition and then exposing the surface to infrared radiation or microwave radiation. Katoot states that inorganic glasses and ceramics of various compositions such as silica, soda glass, borosilicate glass, high calcium and phosphate glasses, quartz, etc. may be utilized according to the present invention. Katoot, however, does not state the purpose for the addition of these materials.

In the Office Action, it was asserted that it would have been inherent for partially embedding silica particles in the surface of elastomeric articles, such as gloves. Katoot, however, does not disclose or teach partially embedding silica particles in the outside


surface of an elastomeric article such as a glove. In fact, the only mention of the use of silica particles in an elastomeric article in Katoot is in Example 35 appearing in column 27. Example 35 is directed to the surface modification of silicone catheters and slabs to increase lubricity. In this example, the silicone substrates were immersed in a first solution and microwaved and then soaked in a second solution which contained silica. After soaking in the second solution, the samples were cured in an oven. Next, three layers of carboxymethyl cellulose were formed on the substrate over the layer containing silica particles. Again, the multi-layer coating was for increasing the lubricity of the substrate.

Thus, as opposed to teaching the formation of elastomeric articles having silica particles partially embedded within the outside surface of the article in order to improve the gripping properties of the article, Katoot teaches coating elastomeric articles with multiple layers in order to increase the lubricity of the article and teaches incorporating silica particles in a middle layer of the coating below three exterior layers of a polymer. As such, it is believed that claims 1, 12, and 31 patentably define over Katoot.

In summary, it is believed that the claims as currently amended are patentably district over the prior art of record. Thus, it is believed that the present application is in complete condition for allowance. Examiner Nolan, however, is invited and encouraged to telephone the undersigned at her convenience should any issues remain after consideration of this Amendment in the hopes of expediting prosecution.

2/18/03
Date

Respectfully submitted,


Timothy A. Cassidy
DORITY & MANNING, P.A.

P.O. Box 1449
Greenville, SC 29602
(864) 271-1592
(864) 233-7342

APPENDIX A

1. (Amended) A surface-modified glove article for use on a human hand, comprising:

an elastomeric matrix in the shape of a glove that receives the human hand therein, the matrix having an inside surface that contacts the human hand received within the hollow elastomeric glove shape, and an outside surface; and

a plurality of colloidal silica particles adhered to at least a portion of the outside surface of the matrix but not extending through the thickness of the matrix, the colloidal silica particles being affixed to the outside surface of the matrix, at least certain of the silica particles being partially embedded within the outside surface.